

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

RECEIVED  
CENTRAL FAX CENTER

JUL 12 2006

Remarks

In response to the Office Action mailed April 12, 2006, claim 17 is herein amended. Support for amendment to claim 17 is found in claim 17 of the application as originally filed.

The specification is herein amended to correct a clerical error. The specification as originally filed described dimethylhexyloxy as an OC<sub>10</sub>. The term OC<sub>10</sub> is herein amended to OC<sub>8</sub> on p. 3 line 19 of the specification as originally filed in order to correct the inconsistency between the name dimethylhexyloxy and the formula OC<sub>10</sub>. Support for this amendment is found on p. 3 line 19 in the specification as originally filed.

The specification is herein amended to correct an inconsistency between name and formula in the characterization of the prior art. Accordingly, term "dimethylhexyloxy" is herein amended to "dimethyloctyloxy" on p. 10 line 1, p. 12 line 13, and p. 13 line 3 in the specification as originally filed. Support for this amendment is found in prior art reference WO 99/21936 (Schoo et al. filed October 8, 1998) on p. 5 lines 12-13, which reference has been incorporated by reference into the present application as filed. See p. 5 lines 6-15 and p. 10 lines 2-3.

No new matter is added by these amendments, and no new matter is presented that would entail an additional search.

Applicants note with appreciation withdrawal of rejection of claims 17-20 under 35 U.S.C. §102(b) with respect to WO 99/21936.

Upon entry of this amendment claims 13-20 are pending.

The specification complies with 35 U.S.C. §132(a)

In an Office Action mailed May 9, 2005, the specification was objected to because of an informality and stated, "[t]he specification names 3,7-dimethylhexyloxy as an OC<sub>10</sub> group, but dimethylhexyloxy is an OC<sub>9</sub> group." In a response filed September 9, 2005 Applicants amended the specification as originally filed replacing the term OC<sub>10</sub> with the term OC<sub>9</sub> to correct this clerical error.

The outstanding Office Action on pp. 3-4 ¶3 objects to the Amendment filed February 8, 2006 that amended the term OC<sub>10</sub> to the term OC<sub>9</sub> on p. 3 line 19, p. 10 line 1, p. 12 line 13, and p. 13 line 3, as introducing new matter into the specification. Applicants respectfully traverse for the following reasons.

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

A description of dimethylhexyloxy as an OC<sub>10</sub> at p. 10 line 1, p. 12 line 13, and p. 13 line 3 in the specification as originally filed is within the context of a characterization of a prior art reference, WO 99/21936 (Schoo et al. filed October 8, 1998). The Examiner is correct that a review of WO 99/21936 shows that the formulaic term OC<sub>10</sub> is correctly used in WO 99/21936.

A further review of WO 99/21936 reveals that the term OC<sub>10</sub> is used to characterize dimethyloctyloxy, among other compounds. Accordingly, Applicants made a clerical error in characterizing that reference, therefore that clerical error in the specification at p. 10 line 1, p. 12 line 13, and p. 13 line 3, is corrected here, viz., to replace the term OC<sub>9</sub> with the term OC<sub>10</sub> and further amend the specification at p. 10 line 1, p. 12 line 13, and p. 13 line 3 to replace the term dimethylhexyloxy with the term dimethyloctyloxy. Support for this amendment is found in the prior art reference WO 99/21936 (Schoo et al.) on p. 5 lines 12-13, cited in and incorporated by reference in the present application as originally filed. See p. 5 lines 6-15 and p. 10 lines 2-3. Therefore, this rejection can properly be withdrawn, an action which is respectfully requested.

Further, p. 3 line 19 of the specification as originally filed states, "OC<sub>10</sub>, in particular 3, 7-dimethylhexyloxy". This is a clerical error which is an inconsistency between the name dimethylhexyloxy and the formula OC<sub>10</sub>. To correct this inconsistency, the term OC<sub>10</sub> is herein amended to OC<sub>8</sub> on p. 3 line 19 of the specification as originally filed. Support for this amendment is found in the specification as originally filed on p. 3 lines 17-18, showing that the R variable may be characterized as a C<sub>1</sub>-C<sub>20</sub> alkoxy group. Further support is found on p. 3 lines 19-20 of the specification as originally filed, showing the compound 3, 7-dimethylhexyloxy.

One of ordinary skill in the art would have understood, at the time the present application was filed, that the term OC<sub>8</sub> is encompassed by the term C<sub>1</sub>-C<sub>20</sub> alkoxy. Further, one of ordinary skill in the art would have understood that dimethylhexyloxy is an 8-carbon compound, not a 10-carbon compound, and therefore would be formulaically represented as an OC<sub>8</sub>. Therefore this rejection can be withdrawn, an action which is respectfully requested.

Claims 13-16 comply with 35 U.S.C. §112 ¶1, written description

The Office Action rejects claims 13-16 under 35 U.S.C. §112 ¶1, written description, alleging there is no support for the definition of R<sup>1</sup> and R<sup>2</sup> as separately being a C<sub>1</sub>-C<sub>20</sub> alkylene group. Applicants respectfully traverse.

10/780,472

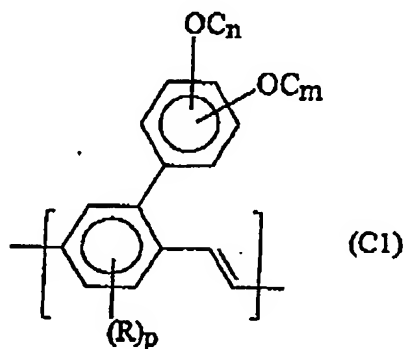
Preliminary Amendment

Date of Deposit: July 12, 2006

Manual of Patent Examining Procedure (MPEP) §608.01(l) states, "[i]n establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims if their content justifies it. Where subject matter not shown in the drawing or described in the description is claimed in the application as filed, and such original claim itself constitutes a clear disclosure of this subject matter, then the claim should be treated on its merits, and requirement made to amend the drawing and description to show this subject matter. The claim should not be attacked either by objection or rejection ...." [emphases added] *Manual of Patent Examining Procedure*, §608.01(l), p. 62 (8th Ed. Rev.2, May 2, 2004). Further, MPEP ¶2163 states, "[i]t is now well accepted that a satisfactory description may be in the claims or any other portion of the originally filed specification." *Manual of Patent Examining Procedure*, §2163, p. 134 (8th Ed. Rev.2, May 2, 2004).

Claim 13 is an original claim submitted in a preliminary amendment that was co-filed with the present application on the same date, February 17, 2004. According to MPEP §608.04(c), a preliminary amendment that is submitted on the filing date of an application is part of the original disclosure of the application. *Manual of Patent Examining Procedure*, §608.04(c), p. 97 (8th Ed. Rev.2, May 2, 2004). Therefore, the preliminary amendment that was co-filed with the present application is part of the original disclosure, as acknowledged by the Examiner on p. 2 ¶1 of an Office Action mailed May 9, 2005.

Claim 13, in part, is directed to Aryl-substituted poly-p-arylenevinylene consisting of a repeating unit of the formula (C1),



wherein  $R^1$  is a  $C_1$ - $C_{20}$  alkylene group, in which one or more hydrogens are optionally substituted by F or a  $C_4$ - $C_{12}$  aryl group and/or one or more non-adjacent  $-CH_2-$  units are optionally

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

substituted by C<sub>4</sub>-C<sub>12</sub> arylene, -O-, -S-, -CO-, -COO-, -OCO-, -SO-, -SO<sub>2</sub>-, -N(R<sup>3</sup>) or -N(R<sup>3</sup>)CO-, and where R<sup>3</sup> is C<sub>1</sub>-C<sub>20</sub> alkyl; and wherein R<sup>2</sup> is the same or different from R<sup>1</sup> and constitutes a straight-chain branched or cyclic C<sub>1</sub>-C<sub>20</sub> alkyl group or an C<sub>1</sub>-C<sub>20</sub> alkylenylene group, in which one or more hydrogens are optionally substituted by F or a C<sub>4</sub>-C<sub>12</sub> aryl group and/or one or more non-adjacent -CH<sub>2</sub>- units are optionally substituted by C<sub>4</sub>-C<sub>12</sub> arylene, -O-, -S-, -CO-, -COO-, -OCO-, -SO-, -SO<sub>2</sub>-, -N(R<sup>3</sup>) or -N(R<sup>3</sup>)CO-, and where R<sup>3</sup> is C<sub>1</sub>-C<sub>20</sub> alkyl.

Claim 13 is an original claim which clearly discloses that R<sup>1</sup> and R<sup>2</sup> can each separately be a C<sub>1</sub>-C<sub>20</sub> alkylenylene group. This disclosure by Applicants is sufficiently detailed that one of ordinary skill in the art of polymer chemistry would, at the time the application was filed, have reasonably concluded that Applicants were in possession of the subject matter of the claims. Claims 14-16 depend directly or indirectly from claim 13, and incorporate the subject matter of claim 13 and contain additional subject matter. Therefore claims 14-16 also comply with the written description requirement of 35 U.S.C. §112 ¶1 for the same reasons. Therefore this rejection can be withdrawn, an action which is respectfully requested.

Claims comply with 35 U.S.C. §112 ¶2

The Office Action rejects claims 13-16 under 35 U.S.C. §112 ¶2 alleging that definitions of R<sup>1</sup> and R<sup>2</sup> as separately being a C<sub>1</sub>-C<sub>20</sub> alkylenylene group, which is a divalent group, is confusing since R<sup>1</sup> and R<sup>2</sup> alone is a monovalent group. Applicants respectfully traverse.

Applicants respectfully disagree with the characterization of R<sup>1</sup> and R<sup>2</sup> as separately being monovalent groups. Rather, R<sup>1</sup> and R<sup>2</sup> are variables that represent separate and distinct chemical moieties within a chemical formula, and have no implied definitions associated with them. For example, in certain embodiments, R<sup>1</sup> and R<sup>2</sup> are each C<sub>1</sub>-C<sub>20</sub> alkylenylene groups, while in other embodiments, R<sup>1</sup> is an alkylenylene group and R<sup>2</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl group. Nowhere does the subject matter of claim 13 specify that R<sup>1</sup> and R<sup>2</sup> are chemical moieties of a specific valence.

Defining the parameters of a chemical formula by providing a general formula in which the variables can represent separate and different chemical moieties having a variety of different valences in different embodiments is common practice in the polymer arts. For example U.S. patent number 7,049,010 (Holmes et al., filed October 21, 1998) is directed to polymeric materials for electroluminescent devices. Claim 1 of U.S. of Holmes defines R and R' as, "independently: a straight or branched chain alkyl group, alkenyl group, or alkynyl group having

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

1-10 carbon atoms; or an aromatic or non-aromatic heterocyclic group ..." The full claim 1 in the issued Holmes patent reads as follows:

1. A compound comprising a film-forming conjugated poly(1,4-arylene vinylene) compound having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound, wherein the substituents are independently selected from: (i) R--, RO--, RS--, and RR'N-- wherein R and R' are independently: a straight or branched chain alkyl group, alkenyl group, or alkynyl group having 1-10 carbon atoms; or an aromatic or non-aromatic heterocyclic group; and (ii) a group in which the adjacent substituents together form a cyclic group, the cyclic group containing, in addition to the two carbon atoms of the arylene unit to which it is attached, 1-10 carbon atoms and 0 or 1-6 hetero atoms selected from O, S and N. [emphasis added]

Holmes is representative of myriad other patents within the field of polymer chemistry, and claim 1 in Holmes demonstrates that Applicants' claim 13, directed to R<sup>1</sup> and R<sup>2</sup> which include chemical moieties of different valences in different embodiments, would not have been confusing to one of ordinary skill in the art of polymer chemistry at the time the present application was filed.

Claims 14-16 depend directly or indirectly from claim 13 and incorporate the subject matter of claim 13 and contain additional subject matter, and therefore also comply with the requirements of 35 U.S.C. §112 ¶2. For these reasons, this rejection can be withdrawn, an action which is respectfully requested.

Claims are not anticipated

The Office Action rejects claims 17-20 under 35 U.S.C. §102(b) in light of reference WO 99/24526 (Spreitzer et al.), corresponding in English to patent application US 2002/0064680. Applicants respectfully traverse.

No express anticipation

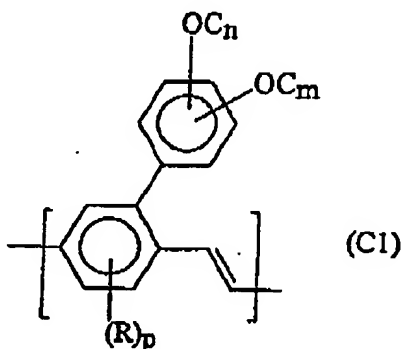
The MPEP states that, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

10/780,472  
 Preliminary Amendment  
 Date of Deposit: July 12, 2006

*Manual of Patent Examining Procedure* § 2131 (8th ed., Rev. 4, Oct. 2005), citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987).

Thus, the standard for rejection under 35 U.S.C. § 102 is identity.

Claim 17 as here amended is directed to an organic electroluminescent device including: an aryl-substituted poly-p-arylenevinylene comprising a repeating unit of the formula (C1),



in which  $-OC_m$  and  $-OC_n$  are alkoxy groups,  $m$  and  $n$  are integers from 2 to 6 with  $m + n = 8$ ,  $p$  is 1, 2 or 3 and in which  $R$  is CN, Cl, F,  $NO_2$  or  $SO_3Z$  wherein  $Z$  is a monovalent cation, or in which  $R$  is  $-XR^1$  wherein the unit  $-X-$  represents a single bond,  $-O-$ ,  $-S-$ ,  $-CO-$ ,  $-COO-$ ,  $-OCO-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-N(R^2)-$  or  $-N(R^2)CO-$ , and wherein  $R^1$  and  $R^2$  are the same or different and constitute a straight-chain branched or cyclic  $C_2$ - $C_{20}$  alkyl groups or together a  $C_2$ - $C_{20}$  alkylene group, in which in  $C_2$ - $C_{20}$  alkyl or  $C_2$ - $C_{20}$  alkylene groups one or more hydrogens are optionally substituted by F or a  $C_4$ - $C_{12}$  aryl group and/or one or more non-adjacent  $-CH_2-$  units are optionally substituted by  $C_4$ - $C_{12}$  arylene,  $-O-$ ,  $-S-$ ,  $-CO-$ ,  $-COO-$ ,  $-OCO-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-N(R^3)$  or  $-N(R^3)CO-$ , and where  $R^3$  is  $C_1$ - $C_{20}$  alkyl, or in which  $R$  is a  $C_4$ - $C_{12}$  aryl group which may or may not be substituted; the organic electroluminescent device capable of providing a service life of at least 45 h when driven at a constant current, at an initial brightness of  $200 \text{ Cd/m}^2$ , and at an ambient temperature of  $80^\circ\text{C}$ .

As a preliminary matter, the polymers of the electroluminescent device which are the subject matter of claim 17 as here amended are different from the polymers shown in WO 99/24526. Each of monomers 3 and 16 in WO 99/24526 has a methoxy group attached to the

10/780,472

Preliminary Amendment

Date of Deposit: July 12, 2006

lower aryl ring. Applicants here amend claim 17 so that when R is  $\text{XR}^1$  and X is  $\text{—O—}$ ,  $\text{R}^1$  is a  $\text{C}_2\text{—C}_{20}$  alkyl group. Therefore, monomers 3 and 9 in WO 99/24526 are different from the subject matter of claim 17 as here amended.

Monomer 9 in WO 99/24526 shows a  $\text{CF}_3$  group attached to the lower aryl ring. Applicants here amend claim 17 so that R is selected from CN, Cl, F,  $\text{NO}_2$  or  $\text{SO}_3\text{Z}$ . Therefore, monomer 9 in WO 99/24526 is different from the subject matter of claim 17 as here amended. Monomer C is different from the polymers which are the subject matter of claim 17 because the lower aryl group of monomer C is unsubstituted. In contrast, claim 17 is directed to a polymer in which lower aryl group is substituted by the variable  $(\text{R})_p$ , in which p is 1, 2, or 3. Therefore, monomer C in WO 99/24526 is different from the subject matter of claim 17 as here amended.

Polymer P6 does not anticipate the subject matter of claim 17 as here amended because it requires a methoxy group. In contrast, claim 17 as here amended is directed to a formula of C1 including, when R is  $\text{XR}^1$  and X is  $\text{—O—}$ ,  $\text{R}^1$  is a  $\text{C}_2\text{—C}_{20}$  alkyl group. Therefore, polymer P6 in WO 99/24526 is different from the subject matter of claim 17 as here amended.

Polymers P8, P9, and P12 of WO 99/24526 require 2 dimethyloctyloxy groups. Claim 17 as here amended is directed to a repeating unit of the formula (C1), in which  $\text{—OC}_m$  and  $\text{—OC}_n$  are alkoxy groups and m and n are integers from 2 to 6 with  $m + n = 8$ . Thus, claim 17 as here amended is directed to a dimethylhexyloxy group as an upper limit. Therefore, polymers P8, P9, and P12 in WO 99/24526 are different from the subject matter of claim 17 as here amended.

Further, nowhere does prior art reference WO 99/24526 show the subject matter of claim 17 as here amended that the organic electroluminescent device capable of providing a service life of at least 45 h when driven at a constant current, at an initial brightness of  $200 \text{ Cd/m}^2$ , and at an ambient temperature of  $80^\circ\text{C}$ . Therefore, prior art reference WO 99/24526 does not show each and every element as set forth in claim 17 and does not anticipate the subject matter of claim 17.

The Office Action on p. 5 ¶7 alleges that polymer P8 is the same as formula C8 shown in Applicants' specification. Applicants respectfully disagree.

Polymer P8 of WO 99/24526 is a copolymer comprising 50% of 2,5-bis(chloromethyl)-3'-(3,7-dimethyloctyloxy)biphenyl and 50% of 2,5-bis(chloromethyl)-4-methoxy-3',4'-bis(2-methylpropoxy)biphenyl.

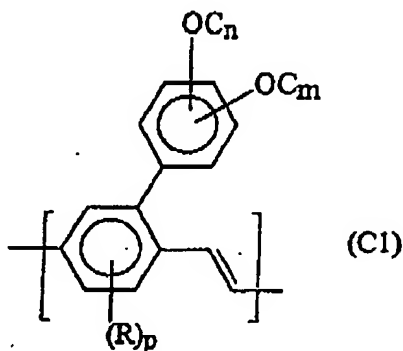
First, this polymer is different from formula C8 in Applicants' specification. Compound 2,5-bis(chloromethyl)-3'-(3,7-dimethyloctyloxy)biphenyl of WO 99/24526 requires two

10/780,472  
 Preliminary Amendment  
 Date of Deposit: July 12, 2006

dimethyloctyloxy groups. In contrast, the first compound of formula C8 only has one dimethyloctyloxy.

Second, formula C8 in Applicants' specification is shown as a comparative example to demonstrate the advantage of replacing a monomer unit of the prior art polymer of WO 99/24526 with a monomer unit of Applicant's polymers. See Example 2 pp. 12-13. Therefore, formula C8 is a hybrid polymer, 50% of which is a compound of WO 99/24526 and 50% of which is a compound of the subject matter of claim 17.

Most important, the device of claim 17 has a polymer which simply is a repeating unit of the formula (C1).



and is not the hybrid polymer of formula C8. Therefore, the subject matter of claim 17 is different from polymer P8 of WO 99/24526, and therefore polymer P8 of WO 99/24526 does not expressly anticipate claim 17.

Claims 18-20 which depend directly or indirectly from claim 17 and therefore include all of the subject matter of claim 17 and contain additional subject matter likewise are not expressly anticipated by WO 99/24526.

The Office Action on p. 4 ¶7 alleges that the service life limitations set forth in claim 17 are expected to be inherent in the prior art devices made with polymers P6, P8, P9, or P12.

#### No inherent anticipation

It is shown above that WO 99/24526, the reference of record, does not expressly anticipate claim 17-20, because claim 17 is directed to a polymer which is a repeating unit of the formula (C1), and this is not found in the prior art. Applicants now show that the prior art fails to inherently anticipate the subject matter in claim 17.



10/780,472

Preliminary Amendment

Date of Deposit: July 12, 2006

Inherency arises when a single prior art reference fails to disclose the claimed invention per se, but the natural and invariable practice of the reference would necessarily and inherently meet all of the elements of the claimed invention. *Ethyl Molded Products v. Betts Package, Inc.*, 9 U.S.P.Q. 2d. 1001, 1032-1033. Inherency exists only when the prior inherent event can be established as a certainty; that an event may result from a given set of circumstances is not sufficient to establish anticipation by inherency. *See Phillips Petroleum Co. v. U.S. Steel*, 6 U.S.P.Q.2d 1065 at 1076-1077, 673 F. Supp. 1278 (D. Del. 1987).

Probabilities are not sufficient for prior art to anticipate an invention inherently; a prior inherent event cannot be established based on speculation or where a doubt exists. *Id.*; *E.I. du Pont v. Phillips Petroleum*, 2 U.S.P.Q.2d 1545 at 1552, 849 F. 2d 1430 (Fed. Cir. 1988); *Schering Corp. v. Precision-Cosmel Co.*, 227 U.S.P.Q. 278 614 F. Supp. 1368 (D. Del. 1985) and many other cases.

Claim 17 is directed to, inter alia, an organic electroluminescent device which is capable of providing a service life of at least 45 h when driven at a constant current, at an initial brightness of 200 Cd/m<sup>2</sup>, and at an ambient temperature of 80 °C.

None of each of these four highly specific features, which are service life characteristics that were experimentally determined and are required of the device of claim 17, could have been established as a certainty without any doubt, for the polymers that are the part of the device of claim 17, based on what is shown in WO 99/24526. Any one of these aspects of the service life of the device, viz., of at least 45 h, when driven at a constant current, at an initial brightness of 200 Cd/m<sup>2</sup>, and at an ambient temperature of 80 °C, let alone all four, would not have led necessarily and invariably from WO 99/24526 to the device of claim 17. Claim 17 is not inherently anticipated because, as shown in the previous sections, it contains subject matter which is different from and is therefore not expressly anticipated by WO 99/24526, and this subject matter, the service features, would not have been predicted.

Nowhere in WO 99/24526 would practice of the disclosure of that reference have led invariably to the subject matter in claims 17 as amended. Indeed, WO 99/24526 shows materials that differ from what is found in claim 17, among other reasons, because the monomer of claim 17 is not the same as what is found in WO 99/24526.

Each of the four service life characteristics were obtained from highly specific and well-defined results by actual practice of the device. Speculation based on mere structural similarity

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

is insufficient to establish inherent anticipation, in view of a legal standard that requires absence of any doubt.

For the foregoing reasons, the rejection of claims 17-20 as anticipated directly or inherently under 35 U.S.C. §102(b) should be withdrawn, an action that is respectfully requested.

Claims are non-obvious

The Office action rejects claims 13-20 under 35 U.S.C. §103(a) in light of reference WO 99/21936. Applicants respectfully traverse.

MPEP §2141 states that "objective evidence or secondary considerations such as unexpected results, commercial success, long-felt need ... are relevant to the issue of obviousness and must be considered in every case in which they are present." [emphasis added] *Manual of Patent Examining Procedure*, §2141, p. 97 (8th Ed. Rev.2, May 2, 2004).

Applicants' specification provides Examples 1 and 2, showing output comparisons of prior art copolymers of WO 99/21936 with polymers of the present claims. See Examples 1 and 2 pp. 9-14 of the specification as originally filed. For example, Example 1 shows a comparison of a polymer of WO 99/21936 with a polymer in which a monomer of the prior art is replaced with a monomer of the present claims. See Example 1 p. 10 formula C4 and p. 11 formulae C5 and C6.

The specification as originally filed thus subjected the electroluminescent (EL) device of WO 99/21936 to a service life test in which the device, the positive pole of the voltage source being connected to an anode and the negative electrode to a cathode, was driven at constant current and at an initial brightness of 100 Cd/m<sup>2</sup> while maintaining an ambient temperature of 70 °C. See p. 10 lines 9-12 in the specification as originally filed. The service life, defined as the time within the brightness drops to half its initial value, thus determined was found to be about 180 h. See p. 10 lines 12-13 in the specification as originally filed. The voltage increase needed to maintain a constant current during the service life was found to be about 0.015 V/h. See p. 10 lines 13-14 in the specification as originally filed. The service life at 20 Cd/m<sup>2</sup> and room temperature exceeds 5000 h, which demonstrates the drastic reduction of service life associated with the use of a higher brightness and an elevated ambient temperature of 70 °C. See p. 10 lines 14-17 in the specification as originally filed.

10/780,472

Preliminary Amendment

Date of Deposit: July 12, 2006

In comparison, when the EL devices including the monomers of the present claims (formula C5 and C6) were subjected to the service life test, the service life of the EL device comprising the polymer of formula (C5) was 925 h. The voltage increase was about 2 mV/h. By collecting the data for a large number of samples the service life is found to be at least 800 to 1200 h. See p. 11 lines 12-15 of the specification as originally filed. Similarly, the service life of the EL device comprising the polymer of formula (C6) was found to be at least 800 to 1200 h. The voltage increase was found to be about 1.5 to 2 mV/h. See p. 11 lines- 16-17 of the specification as originally filed.

The experimental data obtained from this Example clearly demonstrate the unexpected results, viz., that the service life increases significantly by using an aryl-substituted poly-p-arylenevinylene in accordance with the claims as here amended. In particular, this example demonstrates the use of a red to orange light emitting polymer in accordance with the subject matter of the claims, in an organic EL device capable of providing a service life of at least 800 to 1200 h when driven at a constant current, an initial brightness of 100 Cd/m<sup>2</sup>, and an ambient temperature of 70 °C.

Therefore the subject matter of claims 13-20 is non-obvious in light of prior art reference WO 99/21936 and this rejection can be withdrawn, an action which is respectfully requested.

#### Rejection for non-statutory double patenting

The Office Action on pp. 7-8 ¶11 rejects claims 13-20 under the judicially created doctrine of double patenting in view of U.S. patent number 6,743,525.

The Office Action on p.7 states that "a timely filed Terminal Disclaimer in compliance with 37 C.F.R. §1.321(c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground ..." Accordingly, Applicants provide here a Terminal Disclaimer for the co-owned issued patent having U.S. patent number 6,743,525.

Applicants assert that upon entry of the Terminal Disclaimer attached hereto that provisional rejections under the judicially created doctrine of double patenting can properly be withdrawn, an action which is respectfully requested.

10/780,472  
Preliminary Amendment  
Date of Deposit: July 12, 2006

**RECEIVED**  
**CENTRAL FAX CENTER**

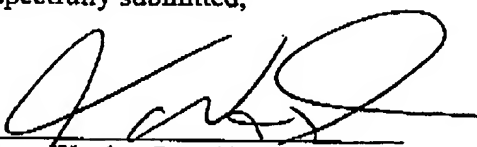
**JUL 12 2006**

Summary

On the basis of the foregoing amendments and reasons, Applicants respectfully submit that the pending claims are in condition for allowance, which is respectfully requested.

If there are any questions regarding these remarks, the Examiners are invited and encouraged to contact Applicants' representative at the telephone number provided.

Respectfully submitted,

By   
Aaron Waxler, Reg.48,027  
Attorney

Dated: July 12, 2006